



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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**North Carolina Board of Transportation
Environmental Planning and Policy Committee
Meeting Minutes for July 9, 2003**

A meeting of the Environmental Planning and Policy Committee (EPPC) was held on July 9, 2003 at 8:00 AM in the Board Room (Room 150) of the Transportation Building. Nancy Dunn chaired the meeting. Other Board of Transportation members that attended were:

Tom Betts	Larry Helms
Conrad Burrell	Frank Johnson
Marion Cowell	Cam McRae
Nancy Dunn	Lanny Wilson
Doug Galyon	

Other attendees included:

Bob Andrews	David Hyder	Sandy Nance
Hal Bain	Berry Jenkins	Ken Pace
Donnie Brew	Sen. Clark Jenkins	Allen Pope
Nicole Burris	Helen Landi	Anthony Roper
Dan Cabonor	Emily Lawton	Bill Rosser
Craig Deal	Don Lee	Roger Sheats
Janet D'Ignazio	Sharon Lipscomb	Jamie Shern
Patty Eason	Robin Little	Mike Stanley
Mark Fowlkes	Carl McCann	John Sullivan
Gail Grimes	Odessa McGlown	Jay Swain
Rob Hanson	Ehren Meister	Greg Thorpe
Phil Harris	Mike Mills	Don Voelker
Ryan Heise	Sarah Mitchell	Marcus Wilner
Mike Holder	Jon Nance	

Ms. Dunn called the meeting to order. The meeting minutes were approved as presented. Ms. Dunn also reminded the committee that last month there was a change in the EPPC start times beginning at the August meeting. The EPPC monthly meetings will now begin at 8:30 AM.

Ms. Dunn opened the meeting by introducing Roger Sheats, Deputy Secretary for Environment, Planning and Local Governmental Affairs, to make several announcements and to introduce the presentations.

Mr. Sheats opened by announcing that NCDOT has recently received three Innovation Awards from the National Association of Development Organizations. The three awards were presented for:

- The Guidance Manual for Assessing Indirect and Cumulative Impacts of Transportation Projects in North Carolina
- The Environmental Permit Process Improvement Initiative
- The use of Geographic Information Systems (GIS) with North Carolina Rural Planning Organizations (RPOs)

These three awards will be formally presented at a ceremony later in the year and NCDOT will have the opportunity to make presentations at a national conference on these three award-winning initiatives.

The primary agenda topic – fresh water mussels -- issue is a complex issue that deserves close attention. Fresh water mussels are currently a very important issue to NCDOT and it will require a partnership effort to find ways to address the issue. Mr. Sheats introduced Mark Fowlkes with the North Carolina Wildlife Resources Commission and an expert on mussels, and Hal Bain with NCDOT's Office of Natural Environment, to discuss several of the current issues surrounding fresh water mussels and project delivery.

Ms. Dunn reminded the committee that the meeting will continue until 9:30 AM, so there will be plenty of time for the presentations and questions. She also introduced and thanked Senator Clark Jenkins for attending the meeting. Ms. Dunn congratulated the department for receiving the three awards.

Mr. Fowlkes opened his presentation by noting he brought mussel samples for display in the back of the room. Mussels come in various shapes and sizes. There are over a thousand species worldwide, a third of them in the United States. A majority of those are located in the southeast, including North Carolina, due to the mountain chains. Within North Carolina there are over sixty species and fifty percent of those are listed by North Carolina as either threatened, endangered or "species of concern." There are seven federally endangered species found in the state. As a group, the mussel is one of the most threatened species in the world.

Mussels are filter feeders and feed on algae, plankton, organic matter, etc. They actively clean the water they live in and are great water quality indicators. Their anatomy is very simple. They can move around slowly (in a life span maybe the length of a football field) and some can live for up to seventy years. Their life cycles are interesting because many of them have a host fish, which they must utilize to survive and reproduce. Mussels tend to be fish specific and there is a lot of research that has yet to be conducted. They don't move quickly so they are easy to catch. Overall, they are very sensitive to water quality and a change in habitat, which makes them a very good indicator of water quality.

Economic benefits include the historic use of fresh water mussels as a food source for early settlers. Currently, they're used as seed pearls. Several mussels exist that are large enough to be a part of the pearl making process. Threats to mussels include the damming of waterways; host fish changes; dredging and mining, changing habitat/floor type; altering stream channels; harvesting (illegal in NC); loss of forested riparian buffers, some agriculture areas, livestock/cattle and animals in streams; urbanization; and sedimentation and erosion from land disturbance, waste water treatment plants, and human disturbance within streams (the use of All Terrain Vehicles

or ATVs). Mr. Fowlkes concluded the presentation by reiterating the importance of fresh water mussels and the difficulty in identifying mussels. He opened up the discussion for questions.

Board Member Frank Johnson asked how long it takes to train a mussel expert. Hal Bain responded approximately three years. Mr. Johnson asked hypothetically why we couldn't take a sample of the DNA and send it somewhere for a quick identification rather than training someone for three years to identify certain mussels. He followed up by asking if there is a simpler process to identify mussels. Mr. Bain noted that the cost of using DNA would be very high and there are unfortunately very few people that have the appropriate training to identify specific mussels in North Carolina.

Mr. Johnson asked if we could physically move the mussels. Mr. Fowlkes noted that that has been done but it's very challenging and risky for the mussel. The issue occurs if it's an endangered species. Fish hosts may also be difficult to handle in a relocation effort. However, not all mussels have fish hosts. Ms. Dunn noted that when a move occurs you have to do it with the understanding that the species may not survive. Mr. Bain commented that the approval process to move mussels is also very stringent.

Board Member Tom Betts asked how the footing of a bridge impacts mussels. The footing itself has minimal impact and the planning process attempts to avoid the mussel populations. The more significant impacts occur with the sedimentation and run-off at the construction sites.

Mr. Johnson asked how many threatened or endangered species are found in NC. Mr. Fowlkes responded there are seven federally protected mussel species and approximately forty state listed protected species in the state.. Mr. Johnson followed up by asking why these can't be identified visibly. Mr. Fowlkes commented that it is very difficult to tell the difference between some mussels. Mr. Johnson asked if mussels could be farmed. Ms. Dunn asked that questions be held until after Hal Bain has had the opportunity to present because he may answer some of the many questions.

Mr. Bain opened his presentation by noting he is not an expert on mussels and many of the questions being asked today are questions being asked by many people. There is so much that is not known about this resource. He noted the role of his Biological Surveys Unit within NCDOT is more than just conducting freshwater and aquatic surveys. The staff only consists of seven full time members and currently there is no one on staff that is permitted to do this type of work. Therefore, the unit relies on three contractors that are certified to do this work and they are the only three currently certified in North Carolina. Surveying can be completed in different manners in the state. The western part of the state allows you to visually survey for mussels because of clear water. The eastern part of the state requires physically feeling for the mussels by hand because of the discoloration of the water.

Mr. Betts asked if it would be helpful to have more staff. Mr. Bain responded that more staff would be beneficial. Mr. Betts asked how more staff could be attained. Mr. Sheats responded that the process with the Office of State Personnel is very challenging and difficult for attaining new staff members. Mr. Johnson responded that something should be done to attain more staff due to the significance of the mussel issue and the potential for major transportation projects to be delayed. Ms. Dunn asked how the Board could help. Mr. Betts asked whether NCDOT could hire more independent contractors. Mr. Sheats responded that all that are qualified are hired already.

Mr. Bain continued the presentation with some of the current challenges. One of the issues is the size of the unit compared to the number of projects. Last year approximately 170 projects were surveyed for mussels. The drought allowed for more surveys to be conducted. This year, less than fifty surveys have been conducted because of the weather conditions. Rain severely hampers the survey work of streams, which we have no control over. To become a certified biologist or contractor is not easy. It requires several permits from various agencies. Mr. Johnson asked whether the fourteen Division Environmental Officers (DEO) could be trained over the next three years? Mr. Bain responded that some are beginning the training and are competent but none are certified. If they can pass the requirements they will be certified. Don Lee would have the specific information on what level each DEO is at towards achieving certification. Mr. Bain noted that another possibility is to train one or two biologists to be able to certify others within NCDOT's staff. Every trip into the field counts towards certification. In order to become certified, an individual must be able to identify all species in a constituency area. Mr. Johnson questioned whether the certification process is actually defined. Mr. Bain responded that his experience is that it's not defined completely.

Mr. Johnson asked again about the possibility of farming mussels. Mr. Bain responded that it's been tried, in a way. The problems occurred with finding the right quality of habitat to return them to the natural environment. Many waters in the state have too much sediment for a healthy return. However, many state waters are improving. Historically, mussels were dealt with on a project-by-project basis. A better approach will be a programmatic approach – looking at a whole ecological area rather than specific site locations.

Mr. Betts asked how we compare to other states and if North Carolina is more strict here than in other states. Mr. Bain responded that that's a recent common question and is being addressed currently with the NC Department of Environment and Natural Resources and the US Fish and Wildlife Service. There is no current answer to this question. Mr. Betts asked how North Carolina compares to the federal government. Mr. Bain noted that it is one of the issues being addressed currently that we're not sure about. Mr. Betts asked for a report back on this question in August. Ms. Dunn commented that this is a very important discussion and it may be appropriate to follow up with this topic at a later date with more information. Mr. Betts referred to Jay Levine of NC State University who is knowledgeable about fresh water mussels. Mr. Bain commented that Mr. Levine is currently scheduled to do some research on mussels for NCDOT following funding approval by the Board.

Mr. Johnson asked the staff what the next big environmental issue will be. Mr. Sheats responded that potentially it could be indirect and cumulative impact (ICI) issues. A recent court ruling could alter the way NCDOT proceeds with projects. Mr. Bain noted that aquatic issues will continue to be an issue. Specifically, the list of threatened and endangered animals will most likely increase and there are several fish that may impede projects. Mr. Johnson asked whether the list will eventually include microbes, bacteria, and other small organisms. Mr. Bain noted that there are other invertebrates on the list of threatened and endangered species but no microbes or bacteria. Mr. Bain added that it is certainly a good question that may pose concerns in the future.

Mr. Betts recommended that the committee invite back the presenting staff and to make recommendations on what things need to be changed to minimize the delays to the projects. Mr. Johnson also recommended that the grant to study mussels noted earlier by Mr. Bain be approved as soon as possible. It was noted that this item is on this month's Board agenda. Ms. Dunn clarified the committee's request to the staff to report back to the EPPC with recommendations on what environmental challenges exist and how the Board can assist staff in addressing them.

Board Member Cam McRae asked who adds to the state list of threatened species. The response was that it is most likely the NC Wildlife Resources Commission. The federal government has a long process that must occur for adding species to the federal list. Any individual or group can push to get a species listed in North Carolina. Mr. McRae noted the accountability of the process to list a species and the accountability of the process to become certified. He recommended that staff review this issue before they return with recommendations. Mr. Bain commented that it would be very appropriate to invite a representative of the US Fish and Wildlife Service to a future EPPC meeting to discuss the procedures for certifying individuals to identify fresh water mussels.

Ms. Dunn asked that EPPC members let the new vice-chair know if there are any topics they would like included on the next EPPC agenda. The new vice-chairperson is Board Member Marion Cowell. The meeting was adjourned.

The next meeting for the Environmental Planning and Policy Committee is scheduled for Wednesday, August 6, 2003 at 8:30 AM in the Board Room (Room 150) of the Transportation Building.

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